



Joint C4ISR Decision Support  
Center

# DSC MSRR Information Brief

Nov 2000

***Keith Dean***  
***Chief, Analytic Services,***  
***DSC***  
***OASD(C3I)***  
***keith.dean@osd.pentago***  
***n.mil***



# Overview

---

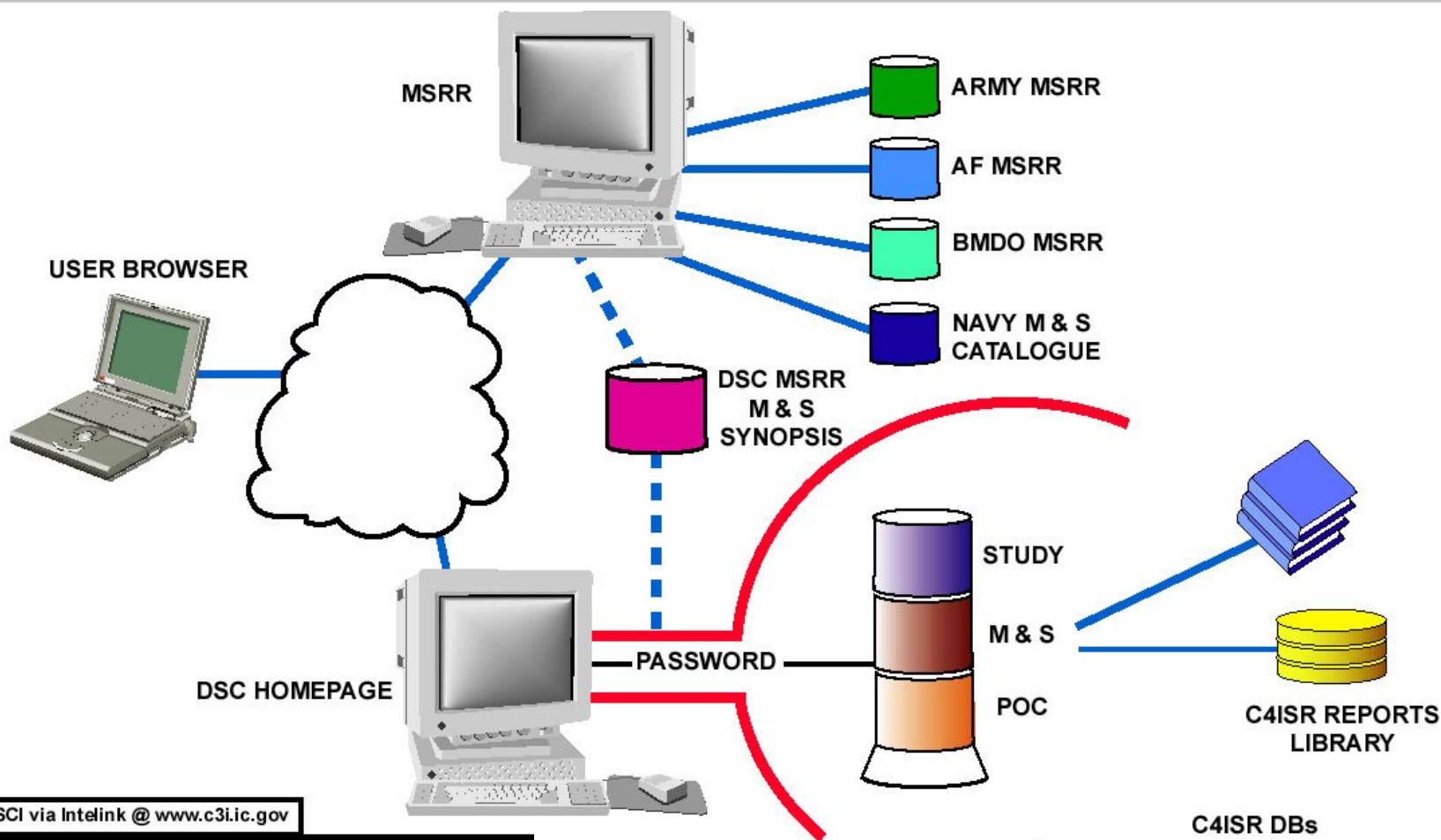
- Current DSC MSRR Status
- Funding to Date
- FY01 Plans
- Thoughts about Proposed Brief to EXCIMS



# DSC Infrastructure Goals

- Reduce C4ISR study costs by consolidating C4ISR study efforts and eliminating duplication
- Reduce C4ISR modeling and simulation costs by consolidating C4ISR modeling efforts
- Reduce C4ISR analysis costs by sharing C4ISR analytical data through shared databases and libraries

# Analytic Databases: The Concept



SCI via Intelink @ [www.c3i.ic.gov](http://www.c3i.ic.gov)

SECRET via SIPRNET @  
[147.254.104.12/DSC/index.html](http://147.254.104.12/DSC/index.html)

UNCLASS @ [www.dsc.osd.mil/\(Registration/Password Required\)](http://www.dsc.osd.mil/(Registration/Password Required))

PLANNED

C4ISR DBs

- 24 HOUR ON-LINE AVAILABILITY
- CONTENT MATCHED TO SECURITY ACCESS



# Key Features

- M&S tool characterization is C4ISR-focused, IAW the DSC charter
- Taxonomy is largely objective and quantitative -- supports several search modalities and a “consumers report” ranking of M&S tools by broad C4ISR areas
- M&S records linked to studies -- provides insight into how tools have been used by whom
- Because of link to studies, database is password protected



## Objects & Environments

ModelName	Objects Explicitly Modelled									
Background Information										
These tables contain generic objects, grouped by domain (GROUND, AIR, SEA, SPACE and OTHER). Each entry in each type of object is explicitly modelled by clicking the appropriate box. If this form is being completed for model selection purposes, identify those objects which must be explicitly modelled. Also indicate if an object is Blurred, Red, BOTH or Neither (leave blank or click NOT).										Ground Table
GROUND OBJECTS										
Mobile Units										
AAA	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Artillery	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Armoured Vehicle	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Artillery	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
CS	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
CS	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Common Road	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Drone	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Engineer	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
FEOS, Ground Station	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Fixed Objects										
Airfield	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Bridge, Power Building	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Fixed Comm Noad	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Fixed SAM Site	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Named Air	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Seaport	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Next Table										
AIR OBJECTS										
AC Bomber	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
AC Bomber	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
CC Aircraft	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Fighter/Attack	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Helicopter	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Maritime Support	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Transport	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red
Refueling Air	Blue	Red	Both	Red	Blue	Red	Both	Red	Blue	Red

ModelName

Environmental Modeling

Background Information

Plots indicate how the effects of the natural environment are modelled.  
If an environmental effect is represented, click the corresponding box.

NATURAL ENVIRONMENT (IMPACT)

Transferability

☐ Not modelled  
☐ Uniform over the area represented in the model  
☐ Linked to geographical and surface conditions represented in the model (for *alter* their equation to pre state)  
☐ Linked to geographical and surface conditions and rather depending on weather

Line of Sight

☐ Not modelled  
☐ Limited to the horizon  
☐ Determined based on geographical representations within the model  
☐ Determined based on geographical representations within the model considering vegetation & cultural

Impact on Detection/Transmission/Reception

☐ Not modelled  
☐ Impact is a function of distance  
☐ Impact is a function of distance and spatial variability (e.g., observers)  
☐ Impact is based on physical models which compute signal to noise ratios

Surface Representation

☐ Not modelled  
☐ Surface represented in the geographic object (e.g., each urban cell is represented)

## Attributes, Fctns & Processes Summary

M&S Characterization Index						
Object Richness Indices						
Object Category	Blue	Red	Overall			
C&SR	0.00	0.00				
AI	0.00	0.00				
SR	0.00	0.00				
Sea	0.00	0.00				
Space	0.00	0.00				
Other	0.00	0.00				
Average	0.00	0.00				
Richness Indices for the Environment						
Ground Environmental Elements	0.00					
Air Environmental Elements	0.00					
Sea Environmental Elements	0.00					
Space Environmental Elements	0.00					
Other Environmental Elements	0.00					
Richness Indices for Functions/Processes						
C&SR Functions/Processes	0.00					
Command & Control	0.00					
ISR	0.00					
Communications	0.00					
Other Functions/Processes	0.00					
Modeling Detail Indices						
Object Attributes	0.00					
Methods for Ground Objects	0.00					
Methods for Air Objects	0.00					
Methods for Sea Objects	0.00					
Methods for Space Objects	0.00					
C&SR Functions/Processes	0.00					
Command & Control	0.00					
ISR	0.00					
Communications	0.00					
Other Functions/Processes	0.00					
Average Modeling Detail	0.00					

# Current Configuration/Status



- Current Configuration
  - Recently Migrated from Mac to PC, DBMS is Filemaker Pro, CGI is Lasso
- On-line on the WWW, SIPRNET, and Intelink
- M&S Database contains detailed records on 142 M&S tools
  - 100% data completeness
  - Semi-annual or annual updates
- Studies Database contains detailed records on 319 planned, on-going, and completed studies
- An abridged version of the DSC MSRR searchable from other MSRR nodes has been created
  - Displays key C4ISR-related information on tools -- avoid redundancy with other sites
  - Accommodates keyword searches
  - Abridged version not password protected -- option to register and view detailed records
  - Linkage to other nodes expected in September

# DSC MSRR Content & Tech Requirements

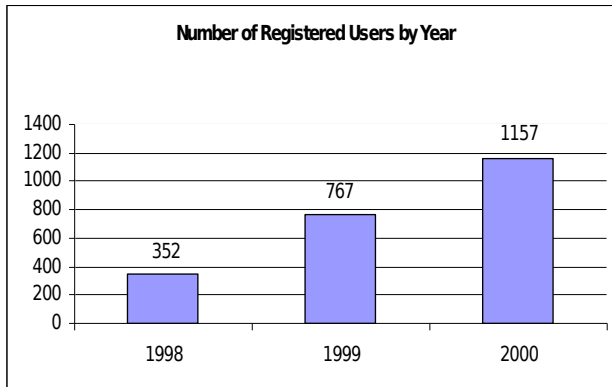
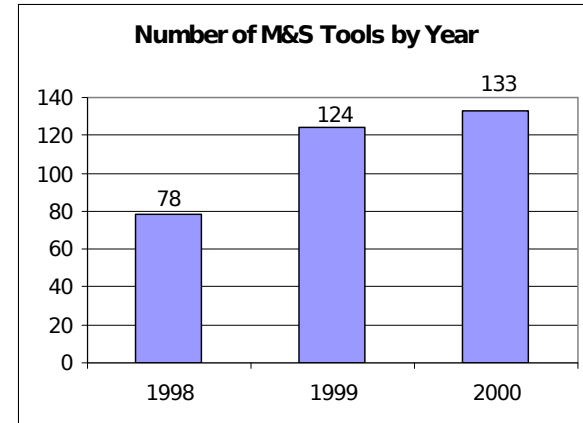
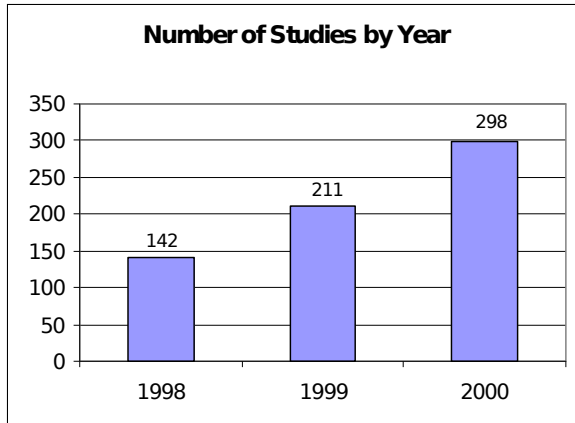


CONTENT		Assessment
Comments		Y
Models		
Descriptive Info Only		
Simulations	Y	Descriptive Info Only
Algorithms	R	
Tools	Y	Descriptive Info Only
Data	R	
Metadata	G	
Data Sets	R	
TECH REQUIREMENTS		
Avail on SIPRNET/JWICS	G	
MSRR Searchable	Y	Under Development
Other Resources		G C4ISR





# Studies and M&S Databases



- *Over 1150 registered users*
- *Typically, 350 database hits per month*



# Funding to Date

(Breakouts estimated)

	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u> *1
Mgmt(PM/CM )	\$150 K	\$150 K	\$100 K	\$100 K	\$100 K
Sys/DB Admin	\$300 K	\$200 K	\$110 K	\$115 K	\$120 K
SW Dev	\$300 K	\$200 K	\$150 K	\$100 K	\$110 K
Data Collection	\$300 K	\$175 K	\$200 K	\$250 K	\$200 K
Content Mgmt	\$200 K	\$175 K	\$260 K	\$265 K	\$200 K
Hardware	\$200 K	\$175 K	\$260 K	\$265 K	\$200 K
<b>TOTALS</b>	<b>\$1.5M</b>	<b>\$900K</b>	<b>\$830K</b>	<b>\$840K</b>	<b>\$730K</b>

Notes:

Govt STEs FY97 \$400K Non-Recurring Startup costs \$10K  
 FY98- Consolidated M&S & Studies efforts (\$200K savings) +  
 less Gov STEs \$900 \$830 \$840  
 FY01-Reduction in data collection and content mgmt (\$110K) \$730  
 FY01- One Contractor/w one subcontractor, partially funded \$1.5M  
 POP thru 15 Nov 01 1.0 1.0 1.0



# FY01 Plans

---

- Complete Transition to PC
- Complete MSRR Interface
- Continue O&M
- Continue data collection/content mgmt
- Begin transition to supported DBMS
- Explore consolidating System Administration and Database maintenance efforts



# Thoughts about Brief to EXCIMS

**Recommend:** Developing Decision Brief in response to tasking

**Tasking:** Consider alternatives to current system to improve MSRR Return on Investment

**Proposed BOD Actions:**

- Refine MSRR requirements
- Pose implementation alternatives  
i.e. distributed operations, combined ops
- Weigh advantages/disadvantages of each alternative



# Points of Contact

- Director: Col Dave Komar, 607-0591  
Crystal Mall 3, 6th Floor
- Home pages
  - INTERNET: [www.dsc.osd.mil](http://www.dsc.osd.mil)
  - SIPRNET: [147.254.104.12/DSC/index.html](http://147.254.104.12/DSC/index.html)
  - Intelink: [www.c3i.ic.gov](http://www.c3i.ic.gov)
- For access to DSC databases contact:  
Jaspal Chhabra, Analytic Support Services  
(703) 607-0615  
[jaspal.chhabra@osd.pentagon.mil](mailto:jaspal.chhabra@osd.pentagon.mil)